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De nieuwe klimaatbeweging

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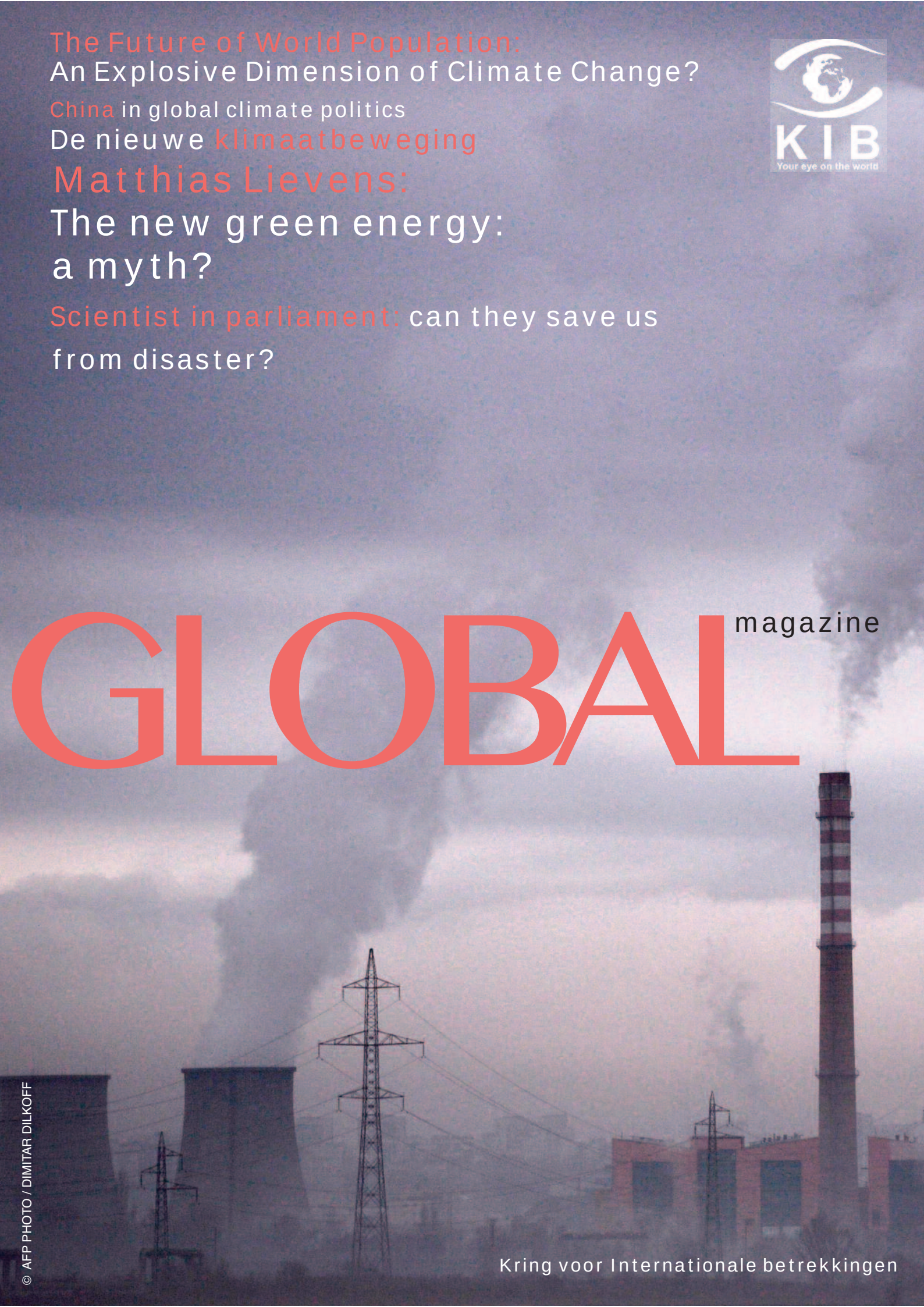

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•Global

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PREFACE

Too many people to save the world?

Nowadays we are faced with serious threats such as the current conflict in Ukraine or extremist groups like Islamic state. So why then talk about something such as climate change? Don't we need to focus on the 'important' and 'urgent' matters? Climate change is urgent. In fact we all know this, but still not much is done about it. There will be a climate conference in Paris in 2015, but it seems that we are moving towards it in silence. Somehow we are focused more on dealing with 'human' problems: armed conflicts, civil wars, and terrorist groups. But of course they are related. Value-rational action will always clash with cultures that do not share these values; instrumental action will always clash with nature, which is not an instrument. When instrumental action becomes the leading value of all our actions, one is destined to face both nature and culture.

However, if one looks more closely to the problem of climate change, one is surprised: instead of a lack of solutions, there seems to be an overabundance of it. Who will save us? Politicians will; scientists will; climate movements will; green economy will; trade unions will; consumers will. Instead of a lack of actors, we are oversupplied. All of them point to different directions when explaining what is going wrong and where the solution lies. Different groups propose their diverse explanations all with their unique catchphrases: green economy, population bomb, 'packages don't litter, people do', de-growth, technocracy, et cetera. Inspired by the work of the philosopher of science Gaston Bachelard, one could wonder: Is this framing of the problem of climate change in metaphors and images not doomed to oversimplify matters?

Instead of facing one unquestioned idea of climate, we are confronted with what Phil Macnaghten & John Urry call contested natures: different views on what climate is, on what nature is, and on what the solution is. This issue of Global tries to be loyal to this diverse array of perspectives. Sarah Van Eynde and David Belis focus on international climate relations, especially the role of China; Jan Van Bavel explains the current situation of population growth and its possible implications for climate change; Massimiliano Simons investigates the claim that we need more scientists as MP's to cope with the problem; Johan Malcorps directs our attention to the role of contemporary climate movements; and Matthias Lievens explains to us in an interview why the metaphor of 'green economy' is not as self-evident as often thought.

These articles do not aim to provide one coherent big story about climate change, a project destined to fail, but instead offers munition to reopen and rethink the debate. In a way, one could state that there are too many people to save the world. But faced with these internal debates among our saviours, one could claim that, perhaps, there are too many worlds to save as well?

Massimiliano Simons

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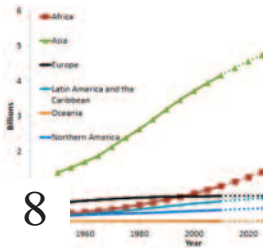

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China in global climate politics

Sarah Van Eynde and David Belis

China has emerged as one of the most powerful forces in global climate politics. Since the 2009 Copenhagen summit (COP-15 or the 15th Conference of the Parties to the United Nations Framework Convention on Climate Change, UNFCCC), it has become clear that China's economic rise has transformed it into a "climate superpower", capable of making or breaking a global climate deal, and that it is only rivaled in this position by the US and arguably the EU. From a Western point of view, however, it has so far hesitated to fully live up to its current international status. Instead, it has focused on domestic policy-making efforts in areas such as renewable energy development, energy efficiency, car standards, air pollution, and experiments with carbon trading. Despite of this positive domestic evolution, its absolute levels of greenhouse gas (GHG) emissions continue to rise, while the (legal) nature of its future international engagement also needs further clarity and maturation. The analysis presented here first traces the history of China's strategic positioning in global (climate) politics and then focuses on the current debates, particularly in the context of the run-up to the COP-21 negotiations for a new global agreement in Paris, 2015.

When looking at other global agreements such as the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer or international organizations such as the World Trade Organization (WTO), it seems that globalization and the global governance of the economy and the environment potentially infringe upon state sovereignty, which asserts that "within its borders the state or government has an entitlement to supreme, unqualified, and exclusive political and legal authority" (McGrew 2008: 23). The Copenhagen summit demonstrated once again that sovereignty concerns are a defining feature of this type of global regimes. In contrast to the WTO and previous Western-dominated global governance systems, however, the climate regime is breaking new ground. China, India and other emerging economies are having a much larger say than ever before in how to deal with the issue of sovereignty, due to the relative decline of the West and rising levels of economic growth and GHG emissions in the East (and elsewhere).

China is especially sensitive to issues that touch upon its sovereignty (Carlson 2005: 3). In the Cold War period, and especially in the 1970s-1980s, the Chinese were notorious defenders of state sovereignty and the principle of non-intervention. In 1983, the Chinese political scholar Wang Xuan asserted that “[s]tate sovereignty, in terms of international law, is supreme internally and independent externally... Any given country is on an equal footing with other countries and it brooks no foreign interference and encroachment” (Wang 1983: 125-146). The origins of this sovereignty understanding go back to the “century of humiliation” (1842-1949), which was closely linked to the so-called “unequal treaties”, a set of treaties signed in the latter half of the 19th century that were highly in favor of Britain, Japan and several other foreign powers (Callahan 2010; Wang 2005).

China's historical unwillingness to be flexible on the issue of sovereignty has directly affected global climate negotiations at various points in time, even if its conception of the principle as such is increasingly challenged by far-reaching economic and environmental globalization. At the 2009 Copenhagen summit, for example, China was seen, by some, as obstructing progress by returning to a "hard" stance on sovereignty, particularly on the issue of binding commitments (Zhang 2010). This has resulted in Copenhagen's "pledge-and-review" approach, which stands in contrast to the Kyoto Protocol's "legally binding" nature, although the difference between what has since been known as "bottom-up" and "top-down" might be an exaggeration. Canada, for instance, simply left the club without any consequence in 2011. Still, the structure of the 2015 climate agreement will be different than the one agreed upon in Kyoto, with more respect for sovereign "contributions", as they are now termed, instead of an emphasis on (legal?) commitments.

Let us now turn to some of the specific debates in international climate negotiations. The latter are governed by a consensus rule of procedures. The consensus rule makes it difficult to translate ambitions and political will (that currently aim to keep global warming to less than 2°C) into a deal that is agreed upon by 190+ countries included under the UN body. Individual countries, or blocks of countries such as BASIC (Brazil, South Africa, India and China), can therefore easily block progress in international climate negotiations. As the world's largest emitter, largest energy consumer and second largest economy, China has come to the fore as a deal-maker or deal-breaker in the international arena. Indeed, a future agreement in which China is absent makes the agreement ex ante ineffective, as the agreement will not cover the bulk of global emissions. The different Chinese culture with regard to international cooperation, sovereignty and the nature of global governance in combination with the consensus rule of procedures in international climate negotiations and the weak effectiveness of the Kyoto Protocol (since it only covered 30% of global emissions) make us believe that the way forward for current international climate negotiations will differ from the 1997 Kyoto Protocol track.

For China, the bottleneck in international climate negotiations relates to adopting binding emission reduction targets and the control mechanism of monitoring, reporting and verification (MRV). Some possible explanations to China's reluctance towards binding emission reduction targets and MRV have to do with its traditional foreign policy interests and principles, nervousness about economic growth and development and the so-called firewall in international climate negotiations between developing and developed countries that was adopted in the UNFCCC, concluded in 1992. On the basis of the principle of Common But Differentiated Responsibilities and respective capabilities – known as CBDR for short – developed and developing countries were assigned to two different categories known as Annex I and Non-Annex I Parties respectively. Non-Annex I Parties, simply put, were not envisaged to shoulder similar reduction commitments as Annex I Parties, and claimed, rightfully, financial support, capacity building and technology transfer from the latter. The firewall continues to be the main stumbling block in negotiations, and ultimately goes back to the debate on sovereignty, since the division gives an institutional assurance to developing countries (even if they have emerged as geopolitical powerhouses) not to be strong-armed into taking targets beyond their capability (Stern 2014).

Different from its international strategic positioning that shows both prudence and a particular kind of assertiveness, China's domestic climate action is comparatively proactive. Paradoxically, China's emissions rose dramatically, while significant progress was made in energy saving and decoupling energy consumption and economic growth. According to the World Bank, China's economy increased 18-fold in the period from 1980 to 2010 while energy consumption increased only 5-fold (World Bank 2014). Further, China heavily invested in developing its renewable energy sectors, growing its forest stock, cutting carbon intensity, establishing a pilot carbon trading market, controlling air pollution, and even capping the use of coal to name just a few examples of recent climate action in China. We also know that China considers peaking its total GHG emissions somewhere in the course of the next decade - but an official position is yet to be taken (Meeting note 2014).

The crucial question for global climate politics is to what extent the U-turn China made domestically when it comes to climate action can be extended to international climate cooperation. In other words, will China take up more ambition and leadership in the international arena, like it did domestically during the past few years?

Recent statements seem to suggest a shift in China's international position as China "is ready to work with the international community to actively tackle the grave challenge of climate change", as stated by Vice Premier Zhang Gaoli at a major climate summit hosted by UN Secretary General Ban Ki-Moon on September 23, 2014 in New York (Zhang 2014). This altering position implies that a previous cornerstone of China's external policy, pronounced by its paramount leader in the 1980s, Deng Xiaoping, as "maintaining a low profile and never claiming leadership" has come to an end when it comes to climate change (Conrad 2012).

At the Durban climate conference in December 2011, the parties agreed to develop a new international climate change agreement that will cover all countries. The new agreement will be adopted in 2015 at the Paris climate conference and will be implemented from 2020. The starting points of the agreement are the intended nationally determined contributions (INDCs) of all parties, which are due in the first quarter of 2015. In the run-up to the Paris agreement, parties will also negotiate on a draft text of the new agreement in Lima in December 2014. The Lima conference could therefore shed light on how parties will handle some major pending issues like the management of the "gap" between the intended contributions and the contributions necessary to keep global warming below 2°C, the system of MRV, and how to move past institutional issues such as Annex I versus Non-Annex I Parties (Stern 2014).

What the 2015 Paris agreement will look like, in summary, highly depends on the position of China in global climate politics, but also by other major actors like the EU, the US and India. The 2015 Paris agreement will likely embrace a bottom-up point of departure in which parties pledge contributions to lower emissions, adapt to climate impacts and agree on volumes and mechanisms of financial transfer. This would then be complemented by "top-down" mechanisms, for instance, an obligatory schedule to reduce emissions, described by Todd D. Stern, the US chief negotiator as a mechanism: "under which there would be a legally binding obligation to submit a 'schedule' for reducing emissions, plus various legally binding provisions for accounting, reporting, review, periodic updating of the schedules, etc. But the content of the schedule itself would not be legally binding at an international level" (Stern 2014). Upfront pledges made by parties themselves that take in to account capabilities could create more ownership and willingness to abide by them than obligations set in top-down fashion.
Hopefully, negotiating countries will be able to overcome the issues mentioned in this article, and work towards a global agreement in an atmosphere of mutual respect and understanding. This is all the more relevant as the old Western-dominated paradigm and geopolitical structure is coming to an end, and new powers, with China at its core, are determined to leave their mark on global governance.

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The Future of World Population: An Explosive Dimension of Climate Change?

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Introduction

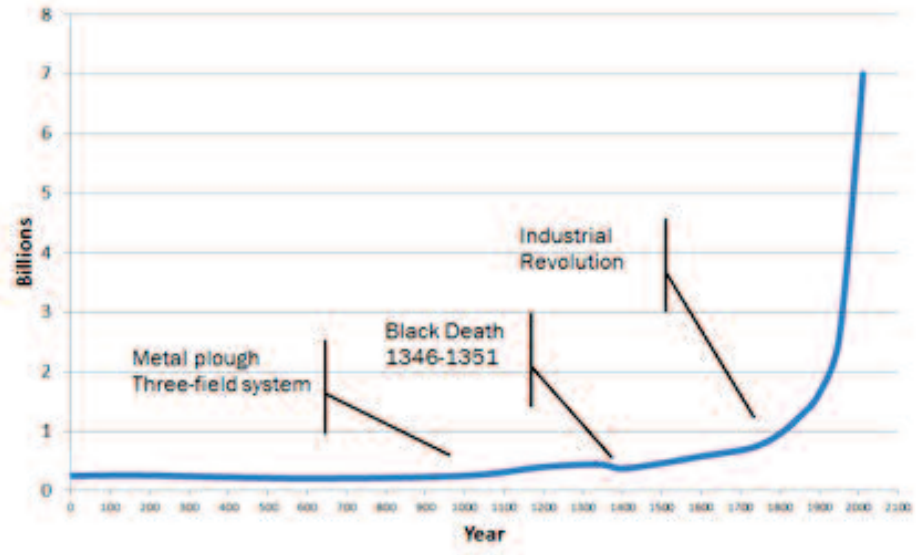
The growth of the human population has raised concerns about the implications for the environment. For example, the Intergovernmental Panel on Climate Change (IPCC) has incorporated differential scenarios of future population growth into its Emission Scenarios. Population growth has raised carbon emissions and, hence, plays a role in global warming (Jiang & Hardee 2001). The global demographic outlook therefore remains a critical issue in the scientific and political debates about climate change.

According to new projections by the United Nations, world population is unlikely to stop growing this century. New estimates indicate that there is a 80% probability that world population will increase from the current 7.2 billion people to between 9.6 and 12.3 billion in 2100. Much of the increase is going to happen in Africa due to its high fertility rates and a slowdown in the pace of fertility decline (Gerland et al. 2014).
Contemporary rates of world population growth have been unprecedentedly high in recent decades. The number of 1 billion was exceeded for the first time in history at the beginning of the 19th century, after about 200 000 years of history of anatomically modern humans. Growth strongly accelerated and the number of 2 billion people was already surpassed around 1920. By 1960, another billion had been added, in 40 instead of 120 years time. And it continued to go even faster: 4 billion by 1974, 5 billion by 1987, 6 billion by 1999 and 7 billion in 2011 (Figure 1). It is therefore fair to talk about a population "explosion".

The explosion was and is not equally distributed around the globe. It got started on a small scale and with a relatively moderate intensity in Europe and America, more or less between 1750 and 1950. From 1950 on, more substantial and intensive growth rates emerged in Asia, Latin America and Africa (Figure 2). Asia already represented over 55% of the world population in 1950 with its 1.4 billion citizens and by the year 2010 this had increased to 4.2 billion people or 60%. Of those people, more than 1.3 billion live in China and 1.2 billion in India, together accounting for more than one third of the world population. In the future, the proportion of Asians will decline and the proportion of Africans will increase. Africa was populated by some 230 million people around 1950, or 9% of the world population. In 2010 there were already more than 1 billion Africans or 15% of the world population. According to UN projections, Africa will continue to grow at a spectacular rate up to 2.2 billion inhabitants in 2050 or 24% of the world population. Population growth is particularly high in poor countries.

At the moment, more than 5.7 billion people, or more than 80% of humanity, are living in what the UN categorise as a developing country. By 2050, that number is expected to increase to about 8 billion people or 86% of the world population. Within this group of developing countries, the group of least developed countries is growing most strongly: from 830 million now, up to an expected 1.7 billion in 2050. This comprises very poor countries such as Somalia, Sudan, Liberia, Niger or Togo in Africa; Afghanistan, Bangladesh or Myanmar in Asia; and Haiti in the Caribbean.

• **Figure 1: Historical growth of the world population since the year 1A.D.**



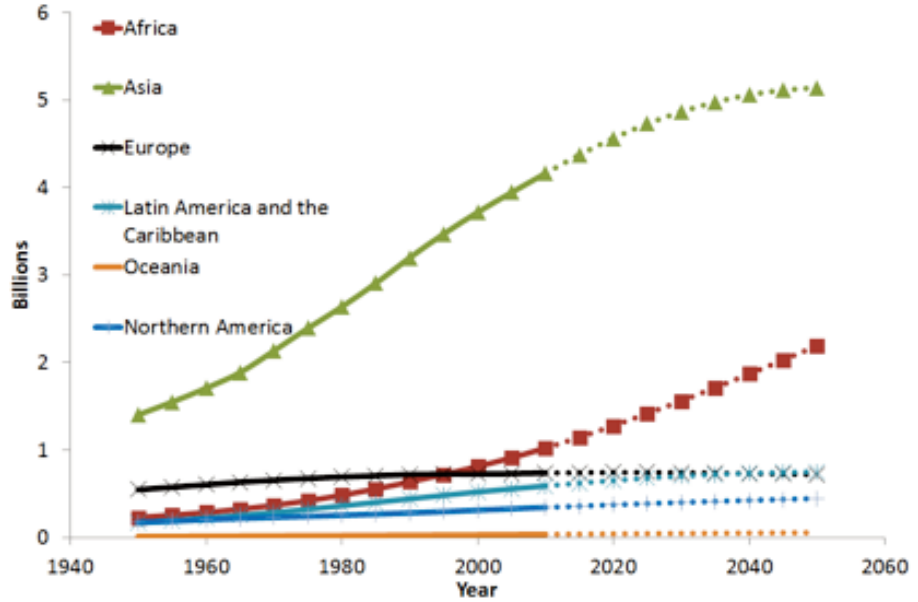
Source: Livi-Bacci (2001, p.27) and UN World Population data

Scenarios for the future evolution of the size and age of the population mainly differ according to the expectations about the further evolution of the birth rate. The evolution of the birth rate is in turn dependent on two things: the trend of the total fertility rate (the average number of children per woman) and population momentum (Van Bavel 2013).

Fertility decline

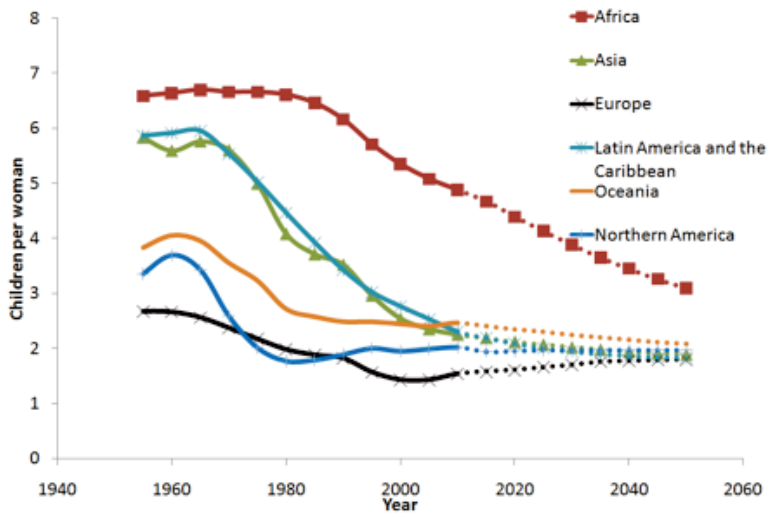
Fertility is going down in all continents, but it's going down particularly slowly in Africa. Figure 3 shows the evolution per world region between 1950 and 2010, plus the projectedevolution until 2050. Asia and Latin America have seen a similar decline in fertility: from 5.9 children per woman in 1950 to 2.5 at the start of the 21st century. Europe and North America had already gone through the largest part of their demographic transition by the 1950's. Their fertility level has been below replacement levels for years. Africa has indeed seen a global decrease of fertility, but the average number of children is still at an alarmingly high level: the fertility merely decreased from 6.7 to 5.1 children per woman.

• **Figure 2: Evolution of the population size by continent, 1950-2050**



Source: UN World Population Prospects, the 2012 Revision; the data after 2010, with dotted line in the figure, are Median Variant projections

• **Figure 3: Evolution of the total fertility rate by world region: 1950-2050**



Source: UN World Population Prospects, the 2012 Revision; the data after 2010, with dotted lines, are medium variant projections

Child mortality, education, and family planning

From the vast literature about the causes of fertility decline, two factors emerge as crucial: child survival and education. Considering child survival first: countries combining intensive birth control with very high child mortality are simply non-existent: in countries with high child mortality, fertility is high, and vice versa. This statistical correlation is very strongbecause the causal relation goes in both directions: improved child survival stimulates fertilitydecline, and fertility decline leads to improved child survival (Van Bavel 2013).

In the demographic transition from high to low birth and death rates, the decline in child mortality has always preceded the decline in fertility. Men, women and families do not practice birth control if they don't have confidence in the survival chances of their children. Better health care is therefore essential, and a lack of good health care is one of the reasons for a persistently high fertility in countries like Niger. Improved education is the second crucial factor behind fertility decline.

It may even be called the most important factor, not just because education is an important humanitarian goal in itself (aside from its demographic effects), but also because with education one can kill two birds with one stone. Education stimulates more birth control but also better child survival, which in its turn will lead to better birth control. Hence, education yields multiplier effects. The influence of education on birth control has been demonstrated in a vast number of studies.

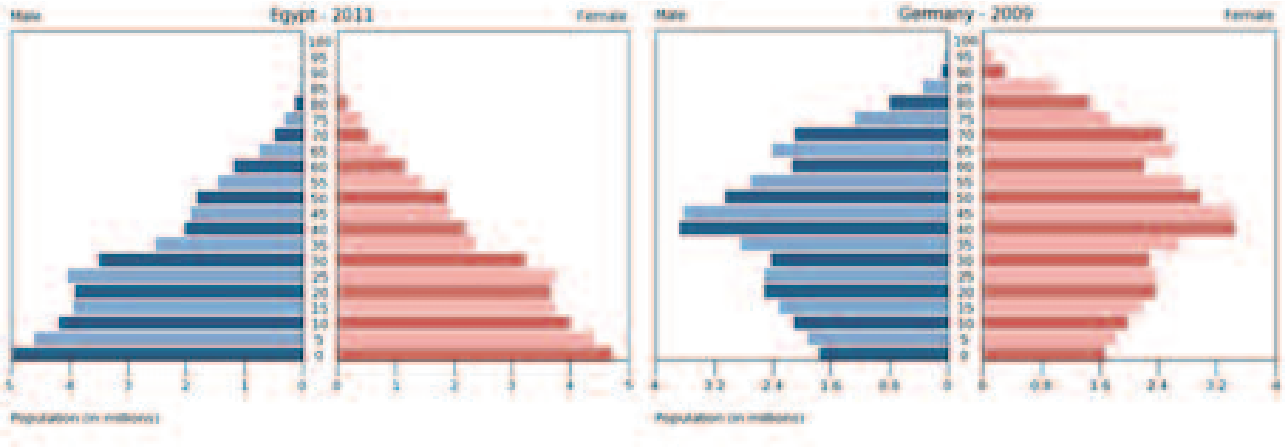
Firstly, education enhances the motivation for birth control: if parents invest in the education of their children, they are having fewer children. Secondly, education promotes a more forward-looking lifestyle: it will lead people to think on a somewhat longer term, to think about tomorrow, next week and next month, instead of living for the day. This attitude is necessary for effective birth control.
Thirdly, education also increases the potential for effective contraception, because birth control doesn't just happen, especially not when efficient family planning facilities are hardly accessible or when there are opposing family values (Van Bavel 2013).

Education also enhances the capacities to practice birth control effectively. It is one thing to get people motivated to practice birth control, but obtaining actual effective contraception is quite another matter. Information concerning the efficient use of contraceptives and increasing the accessibility and affordability of contraceptives can therefore play an important supportive role. There are an estimated 215 million women who would want to have contraception but don't have the means (UNFPA, 2011).

Population Momentum

Even if all the people would suddenly practice birth control much more than is currently considered possible, the world population would still continue to grow for some time. This is the consequence of population momentum, a notion that refers to the phenomenon of inertia, also familiar from physics. Demographic growth is like a moving train: even when you turn off the engine, the movement will still continue for a while. The power and direction of population momentum is dependent on the age structure of the population. Compare the population pyramids of Egypt and Germany (Figure 4). The one for Egypt has a pyramidal shape indeed, but the one for Germany looks more like an onion. As a consequence of high birth rates in the previous decades, the largest groups of Egyptians are to be found below the age of thirty. The younger, the more voluminous the generation. Even if the current and future generations of Egyptians would limit their fertility strongly (as is indeed the case), the birth rate in Egypt would still continue to rise for quite some time, just because year after year more and more potential mothers and fathers reach the fertile ages. Egypt therefore clearly has a growth momentum.

- **Figure 4. Population pyramids of Egypt (left) and Germany (right)**



Source:US Census Bureau, international database

Germany on the other hand has a negative or shrinking momentum: even if the younger generations of Germans would have a larger number of children than the generation of their own parents, the birth rate in Germany would still continue to decrease because fewer and fewer potential mothers and fathers reach the fertile ages. The population momentum on a global scale is positive: even if fertility would decrease overnight to around 2 children per woman, the world population would continue to grow with 40% (from 7 billion to 9.8 billion). Only the rich countries have a shrinking momentum, that is -3%. For Europe the momentum is -7%. The population momentum for the poorest countries in the world is +44%, that of Sub Saharan Africa +46% (Espenshade et al., 2011).

Implications of the population explosion

In the world population debate, the general concerns involve mainly three interconnected consequences of the population explosion: 1) the growing poverty in the world and famine; 2) the exhaustion and pollution of natural resources essential to human survival; and 3) the migration pressure from the poor South to the rich North.

Poverty and famine - Thomas Malthus saw an excessive population growth as an important cause of poverty and famine. This Malthusian vision has been criticized a lot. Indeed, one must take the reverse causal relation into account as well: poverty and the related social circumstances (like a lack of education and good health care for children) are important causes of high population growth. Concerning famine: the production of food has grown faster since 1960 than the world population has, so nowadays the amount of food produced per person exceeds that which existed before the population explosion (Lam, 2011). The problem of famine isn't as much an insufficient food production as it is a lack of fair distribution (in addition to a lack of sustainable ways of production).

Often regions with famine have ecological conditions permitting sufficient production of food, provided the necessary investments in human resources and technology are made. Famine is primarily a consequence of unequal distribution of food rather than population growth, which in turn is caused by social-economic inequality, lack of democracy and (civil) war. Poverty and famine usually have mainly political and institutional causes rather than demographic ones. The simplistic Malthusian vision, that sees the population explosion as the root of all evil, therefore has to be corrected, as is done in Figure 5. Rapid population growth can indeed hinder economic development, but this is only part of the story. As mentioned, poverty is also an underlying cause of rapid population growth. Social factors are at the base of both poverty and population growth. It's those social factors that require our intervention: via investments in education and (reproductive) health care.

Environmental impact - The impact of the population explosion on the environment is unquestionably high, but the size of the population represents only one aspect of this. In this regard it is useful to keep in mind the simple I=PAT scheme: the ecological footprint or impact (I) on the environment can be regarded as the product of the size of the population (P), the prosperity or consumption level (A for affluence) and the technology used (T). The footprint I of a population of 1000 people is for example dependent on how many of those people drive a car instead of a bike, and of the emission per car of the vehicle fleet concerned.
The ecological footprint of the world population has increased tremendously in past decades and the growth of the world population has obviously played an important role in this. But the other factors in the I=PAT scheme have played a relatively bigger role than the demographic factor P. For example, the considerable increase in the Chinese ecological footprint of the past decades is more a consequence of the increased consumption of meat than of population growth (Liu et al., 2008). The carbon dioxide emission of China grew by 82% between 1990 and 2003, while the population only increased by 11% in that same period. A similar story exists for India: the population grew by less than 23% between 1990 and 2003, while the emission of carbon dioxide increased by more than 83% (Chakravarty et al., 2009). The consumption of water and meat in the world is increasing more rapidly than the population. The consumption of water per person is for example threefold higher in the US than in China (Hoekstra and Chapagain, 2007). The African continent has at present the same number of inhabitants as Europe and North America together, over 1 billion. But the total ecological footprint of Europeans and Americans is many times higher than that of Africans (Ewing et al., 2010). Less than 18% of the world population is responsible for over 50% of the global carbon dioxide emission (Chakravarty et al., 2009).

Migration flows - The population explosion has created an increasing migration pressure from the South to the North – and there is also important migration within and between countries in the South. But here as well the message is: the main responsibility doesn't lie with the population growth but with economic inequality. The primary motive for migration was and is economic disparity: people migrate from regions with no or badly paid labour and a low standard of living to other regions, where one hopes to find work and a higher standard of living.

• **Figure 5: Connections between social factors, poverty and population growth**

Given the permanent population growth and economic inequality, a further increasing migration pressure is to be expected, irrespective of the national policies adopted. It is sometimes expected that economic growth and increasing incomes in the South will slow down the migration pressure, but that remains to be seen. After all, it isn't usually the poorest citizens in developing countries that migrate to rich countries. It is rather the affluent middle class in poor countries that have the means to send their sons and daughters to the North – an investment that can raise a lot of money via remittances to the families in the country of origin. There is after all a considerable cost attached to migration, in terms of money and human capital. Not everyone can bear those costs: to migrate you need brains, guts and money. For these reasons, economic development in poor countries is expected to lead to more migration from poor to rich countries in the short run (De Haas, 2007).

7 Billion and counting: what needs to be done?

A world population that needed millennia before reaching the number of 1 billion people, but then added some billions more after 1920 in less than a century: the social, cultural, economic and ecological consequences of such an evolution are so complex that they can lead to fear and indifference at the same time. What kind of constructive reaction is possible and productive in view of such an enormous issue? First of all: we need to invest in education and health care in Africa and elsewhere, not just as a humanitarian target per se but also because it will encourage the spread of birth control. Secondly, we need to encourage and support the empowerment of women, not just via education but also via services for reproductive health. This has triple desirable results for demographics: it will lead to more and more effective birth control, which in itself has a positive effect on the survival of children, which in turn again facilitates birth control. Thirdly: due to population momentum, the world population will certainly continue to grow in absolute figures, even though the yearly growth rate in percentages is already on the decline for several years. The biggest contribution we could make therefore, with an immediate favourable impact for ourselves and the rest of the world, is to change our consumption pattern and deal with the structural overconsumption of the world's richest countries.

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Scientists in parliament: can they save us from disaster?

Massimiliano Simons

"To avoid receiving the candidates' canned responses on these and other issues, I sometimes wish that a debate moderator would forgo a standard question about immigration or jobs and instead ask the candidates to solve a simple puzzle, make an elementary estimate, perform a basic calculation."[1]

Introduction

Environmental themes are common subjects nowadays in political party programs and political discourse. While environmental topics were still something for Green parties and scientists only a few decades ago, now all parties have become 'green'. All parties are concerned with topics such as climate change and there is great consensus that it is a problem that desperately needs a solution.

However, at the same time, there is an apparent dichotomy between the discourse of these parties, its MP's and the real policies they pursue. A study in Portugal, for example, showed that "science is, on the whole, highly regarded by Portuguese parliamentarians. [...] Moreover, they express a desire to privilege the role and participation of scientists in developing science policy. These opinions, however, stand in marked contrast to many of the actual practices of the public policy-making process in Portugal." (Gonçalves 1996, p. 402)

Although every politician is concerned with the environment, in everyday (political) life, they are too busy doing other things.

Scientists of all countries, unite!

So, if the parliamentarians do not really seem to care about climate change, should scientists themselves take matters into their own hands? There are some advocates of this idea, for example Mark Henderson. Henderson wrote a book in 2012 titled The Geek Manifesto: Why Science Matters in which he argues that science should play a crucial role in all policy making nowadays. And since science matters so much, there should be enough scientists in the parliament to deal with these issues in the right way. But, nevertheless, the political reality remains completely different. When he wrote the book, of the UK's 650 MPs, 158 had a business background, 90 were political advisors or organisers, 86 were lawyers, 38 were journalists; and just three had science PhDs. There is little proof that the situation improved significantly since that date. But does the number of scientists in parliament really matter? Why would we need scientists in parliament? There is in fact, very little genuine research done about this topic. The discussion has, on the other hand, mainly taking place in popular press and online. The arguments given in favour of this opinion are

[1] Paulos, J. A., 'Why don't Americans Elect Scientists?,' The New York Times, February 13, 2012.
[2] Wright, Mark, 'On the Importance of having Scientists and Engineers in Parliament,' CaSE, March 17, 2010.
[3] Ladyman, Stephen, 'Why do so few scientists get involved in politics?,' CaSE, March 19, 2010.
[4] Clarkson, Paul, 'Where are the scientist politicians?,' physicsfocus online, March 4, 2014.
[5] Hannan, Daniel, 'Why all politicians should study some science,' The Telegraph, November 17, 2008.

unable to understand what is going on. “[M]ore and more things are simply beyond the grasp of people who aren’t experts in that particular field.”[2] We need well-trained specialists to do the job:

> “Some of the key issues of the day can only be understood with the help of science: cli mate change, drug classification, medicine safety, the impact of pollution, the conser vation of fish stocks, risk analysis, the safety of nuclear power and the disposal of radioactive waste, genetic modification, the list goes on and on.”[3]

This has led to a whole range of concepts claiming to bridge this gap: civic science, citizen science, scientist-activist, citizen volunteer, citizen-activist, etc. (Clark 2001). Some, however, even go further and conclude that this not only requires us to take advise from scientists, but scientists themselves should become politicians. “We cannot hope that the politicians who are non-scientists just ‘get it’. I highly doubt that, after advising a politician, scientists or engineers can trust that something in which they’ve taken years to train is understood in a handful of hours.”[4]
The environmental problems are scientific in nature, and can be coped only by a scientific way of thinking. Politicians tend to think in a legal way and thus offer judicial solutions. “In the absence of hard science, the vacuum is filled by fads, modish theories, things that people would like to be true.” [5] Bill Foster on the other hand a particle physicist who got elected in the USA, claims that his background offers him unique insights into politics: “he is continually thinking of new ways to inject the rigour of science into the often messy give and take that is the essence of politics.” [6] Scientists are claimed to have a different mentality: “all of the political incentives are about getting elected two years from now. And, this causes us to underinvest in things like basic scientific research or early childhood education, where the economic pickup is not in two years but 10 or 20 years.” [7]
However scientists are underrepresented in parliament: it is mainly filled with economists, businessmen or lawyers more concerned with economic growth than with the environment. Julian Huppert, himself an elected scientist, states for example that "[w]e need to encourage people from a diverse range of careers and backgrounds to enter politics so that we have a mix which is more representative of the people that we have been elected to serve." [8] In the UK, there are some scientists in the House of Lords, such as John Krebs, Martin Rees or Robert Winston, but scientists are hardly represented in the House of Commons. Similar arguments are to be found in different countries as well. [9] There have been attempts and cases of these scientists-politicians. In 2006, for example, ‘Scientists and Engineers for America’ (Sefora) was founded and in 2010 there was a ‘science party’ in the UK. Both, however, have disappeared by now.

Especially the American press seems to be concerned with this issue, mainly due the high level of scepticism in the United States with regard to

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[6] Bloudoff-Indelicato, Mollie, 'Physicist elected to Congress calls for more scientists-statesmen,' Nature, November 15, 2012.
[7] Samles, Jonathan, 'From Particles to Politics: Congressman Foster discusses scientific background, political present during Woodridge Rotary luncheon,' The Bugle, May 29, 2013.
[8] Smith, Adam, 'Kicking down the doors: how to give scientific advice to governments,' The Guardian, May 11 2012.

scientific topics such as climate change or evolution theory. This is often contrasted with other countries in which scientists are more valued. John Allen Paulos, for example, wrote in 2012 for the New York Times after returning from Singapore:

> "China has even more scientists in key po sitions in the government. President Hu Jintao was trained as a hydraulic engineer and Premier Wen Jiabao as a geomechani cal engineer. In fact, eight out of the nine top government officials in China have sci entific backgrounds. There is a scattering of scientist-politicians in high government positions in other countries as well. Ger man Chancellor Angela Merkel has a doc torate in physical chemistry, and, going back a bit, Margaret Thatcher earned a de gree in chemistry." [10]

These type of remarks are inspired by a somewhat idealized image of scientists and a cynical view on politicians: scientists seem to talk about the important stuff, like certain facts, while politicians spur much drivel without any content. A famous example of this is Neil de Grasse Tyson, an American astrophysicist and 'science communicator', who stated in an interview in July 2014:

"So in the way that nuclear physicists stood up, I think we should have climate scientists standing up. With any issue that comes up, when we have an emergent scientific truth, we can't just sit back and watch people debate a scientific truth — they should be debating the politics that would follow from the emergent scientific truth. That's really what the debates should be about, but they haven't been. And I'm disturbed by that, because I don't know what kind of democracy that is, if you're gonna run around cherry-picking the results of science, of emergent scientific consensus because it conflicts with your philosophy and you want to be responsible for the governance of the nation, which involves thoughtful planning for the future of our health and our wealth, the state of the economy, all of the above." [11]

Why do we need scientists at all?

But are any of these arguments really sound? Would climate change be solved if only we had some more scientists as MP's? It is ironic that a call for more scientists and scientific expertise is itself based on so little scientific evidence. For example, it can be argued that scientists are not underrepresented at all in parliament. Scientists are in fact only a very small fraction of society, and so there aren't many scientists needed in parliament. The real problem might not be the lack of science in parliament, but the lack of science in society. "So, contrary to what has been repeatedly argued in the past, there isn't a glaring problem with a lack of scientists involved in politics. There is, however, another more distressing issue. Our politicians' collective level of scientific knowledge mirrors that of the general population." [12] Politicians might be scientific illiterate simply because the population in general is.

Even if they would really be underrepresented, it is doubtful that they would make the difference these people expect them to make. In one of the few studies that are conducted concerning this topic, it is argued that scientific training does not really make any difference at all. Taking the Human Fertilisation and Embryology Bill and Act of 2008 in the UK as a case study, there was no evidence found that scientists in parliament vote any different from other members: they do not vote more often on science-related bills, do not favour more or less restrictions on scientific research, nor do they are inclined to form part of a minority faction within their own part (Goodwin 2014, p. 10-12). There are however two remarks to be made here: firstly, it can be doubted whether this really is a scientific topic, but instead was about an ideological or at least a bio-ethical issue. On the other hand, it is doubtful as well whether any 'pure' scientific subjects exist and are discussed in parliament. Secondly, although scientists might not vote differently on bills, they may have an influence behind the scenes. Perhaps they influence the process by agenda-setting prior to the voting (Ibid., p. 19).

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[9] See for example Cliche, Jean-François, 'Seulement 13% des candidates ont une formation scientifique,' leSoleil, March 21, 2014 or Bekkers, Florian, 'Politiek heeft meer mensen met exacte achtergrond nodig,' Groenlinks, September 19, 2010.
[10] Paulos, J. A., 'Why don't Americans Elect Scientists?,' The New York Times, February 13, 2012.
[11] Abrams, Lindsay, 'Neil deGrasse Tyson exclusive: "I don't know what kind of democracy that is, if you're gonna cherry-pick...science because it conflicts with your philosophy"," Salon, July 23, 2014.

Nevertheless, the assimilation of science in politics might be problematic on its own. Science and politics seem to have different goals: the purpose of politics is framed as the 'good life' or economic growth, while for science the goal seems to be the accumulation of knowledge. These goals might be incompatible in a way: "There is a crucial difference between the construction of science-based policy advice and the construction of scientific knowledge. Left to their own devices scientists seldom formulate research questions and design research projects in order to provide solutions for policy problems." (Jung et al. 2014, p. 7). Scientific research is always framed in uncertainty or margins of error, things often lost in the translation to traditional politics. A complete scientific consensus is very rare, and so there are often scientific dissidents, ready to be deployed for politic purposes. Climate change is a very clear example of this: even though climate change deniers are a scientific minority, they are overrepresented in the political debates, especially in the United States. Additionally, claiming that science should serve politics might result in the fact that every scientific project is obliged to formulate concrete purposes or show its utility for society. Science is forced to have a direct 'impact' on society. [13] Instead of incorporating science in politics, this simply reduces science to politics.

Towards a contract with nature

Although, the technocratization of politics is proposed by most above authors as the solution, it is, on the contrary, part of the problem. It is doubtful whether any real scientific and legitimate technocracy can be established, let alone solve the problem of climate change. In fact, these optimists presuppose in their argumentations two problematic models of the relation between science and politics: the decisionist model and the technocratic model (Weingart 1999, p. 154).
According to the technocratic model politics should or will be completely dependent on science. Politics would in fact be nothing more than 'good governance' and the application of a neutral procedure to implement whatever works according to the objective facts. No such type of politics has come into being, though these technocratic dreams were already popular in the 60's (and go at least back to the work of Francis Bacon). On the contrary, in the last decades there is a significant loss of authority of science and of credibility of politicians who base their policies on science (Ibid, p. 151).
The decisionist model claims that the relation between politics and science is equal to the relation between objective knowledge and subjective values: scientists just offer the data, for example the current status of the climate, and it is up to politics to make a decision based on their own (subjective) values and perspectives. The idea that 'science speaks truth to politics' is, however, highly problematic (Bader 2013). This model has some highly implausible presuppositions: (a) the empirical claim that political decision-making goes from a political problem stated by the politician, via the advice by the scientific expert and to the decision made by the politician; (b) the claim that scientific knowledge is completely value-free; (c) and the presupposed neutrality of the experts (Weingart 1999, p. 154-155).

The fact that the relation between science and politics is far more complex has also recently been advocated in the science and technology studies (STS) and the sociology of scientific knowledge (SSK) (see Shapin 1995). The general acceptance of scientific theories is too often thought of as resulting simply from the fact that these theories are manifestly 'true'. This is, however, not really any explanation at all for the general consensus reached about certain scientific theories. Explaining why most people accept climate change and global warming by referring to the simple fact that 'it really is a true fact' will hardly suffice. To do so is to neglect the numerous social practices and networks that had to be mobilized in the process. It required a big network of people, statistical data, environmental disasters, technological instruments and narratives about nature to spread the belief in global warming.

As the French sociologist Bruno Latour points out, we are however inclined to separate these networks in different, strictly separated domains: facts and knowledge on one side, politics and

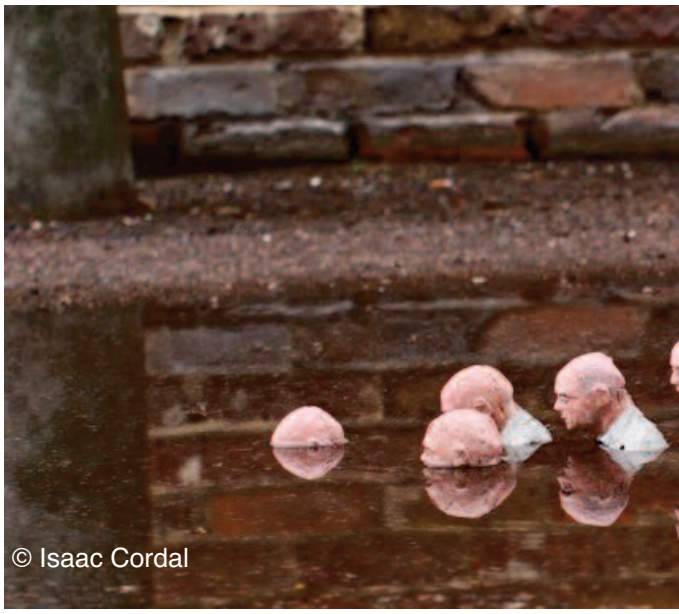
[12] Pomeroy, Ross, 'Politicians Ignorant of Science Because We Are,' Real Clear Science, August 23, 2012.
[13] Smith, Adam, 'Making an impact: when science and politics collide,' The Guardian, June 1, 2012.

social practices on the other. The humans versus the nonhumans.

We claim that this is what separated us from other civilizations and made us 'modern': we are separated from 'primitive' tribes and medieval warlords by a 'Great Divide' (Latour 1993, p. 12). While these tribes seem to mix up politics and nature, by believing in deities ruling over the realms of nature, we have seen the light and separated them: our knowledge about nature is completely detached from all cultural and social processes; our politics is aimed at man alone, and does not rely on these gods of nature. So we westerners claim and so the decisionist and technocratic model presuppose. The assertion that climate change should be coped simply by installing more scientists in parliament, because they have the pure facts, presupposes this separation.

But is there really such a separation? Ironically, climate change might be the perfect example of why this is not the case. Is global warming a pure natural process to be discussed by science and facts, a process of nonhuman things? Or is it a social thing, something made solely by man? It seems to be neither, but instead it is a mix of both. Neither natural nor social, but a hybrid form (Latour, p. 50). Cases such as global warming, ozone hole, deforestation, cancer, overpopulation, Chernobyl, etc. are not clear-cut natural or social, but always a bit of both. In the current threats we are faced with, the distinction has become hard to make: drought and climate change seem to play a crucial role in the Syrian Uprising (De Châtel 2014) while climate change models need to incorporate the behaviour of the masses (Palmer & Smith 2014).

Yet, we are still inclined to keep them disconnected and that is exactly the problem with the whole debate on climate change as well as why the call for more scientists in parliament is misconceived. It is striking that in our political and social thinking we only incorporate the social, but not nature. It is in this context that the French thinker Michel Serres calls up for rewriting our contrat social into a contrat naturel (Serres 1995). When social scientists, lawyers or politicians speak about unemployment, social insurance, the war on drugs or economic growth they hardly speak about the natural processes involved in these matters.
These processes seem to take place in a void, completely ignoring the environment in which it takes place.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Those who decide, who make the political decisions do this in a way completely separated from every aspect of nature:they deal only in language, in laws, in social norms and political values (Ibid., pp. 28-29).

Sure, politicians do talk about global warming, acid rains or floods. But only as separated debates, somehow distinct. The modern separation between the social and the natural is re-enacted once again. If these environmental problems are incorporated at all, they are translated into economic challenges: we do not talk about fundamental conflicts or crises, but about cooperation problems: we can in a way buy ourselves out of global warming by adjusting our personal behaviour. For example by emissions trading, i.e. we put a price on the right to emit an amount of CO2, but by this we neglect the political aspects of the problem altogether. As Kenis & Lievens (2014) state:

"The CO2 emitted by a steel factory is rendered equal to that emitted by a hospital, by a wild camel in the remote regions of Australia, or by a tree being cut down. The CO2 emission saved by building more efficient coal-fired power stations is equalised with that saved by building wind mills. The fact that the latter is a step on the pathway to a sustainable energy system while the former remains within the fossil fuel model is no longer of any account. This equalisation prevents people from making conscious political choices or choosing priorities. The foregoing seems to lead to an easy conclusion: if we want to repoliticise environmental issues, not only 'nature' but also every enmity and conflict should be 'internalised' again." (p. 541)

We should internalise these aspects, to solve global warming, by working towards a fundamental new contract, which breaks with this distinction between politics and nature. As Serres puts it, we need a natural contract: "I mean by natural contract above all the precisely metaphysical recognition, by each collectivity, that it lives and works in the same global world as all the others" (Serres 1995, p. 46). Environmental problems should not be translated to economic recalculations, but should be incorporated into politics as the hybrid problems that they are: mixes of different social aspects, perspectives on nature, technological devices, et cetera. It is not about determining the natural facts and afterwards starting to think about social solutions, but about establishing these 'facts' for what they really are: natural elements always already linked with human elements, economic structures or political relations.

So do we need more exact scientists in parliament? Perhaps, but not because they somehow miraculously know the 'truth' about it all, but because they might offer us different ways of thinking: in a way they are the ones who are somehow more used to work with networks in which the 'natural things' dominate. We don't need them because they have some special method which ensures them to be always correct, they hardly ever are, but because they have an ethos, which might be beneficial: they have a different 'ethic of cognition' (Gellner 1979) which incites them to speak about the natural aspects of things to a further extent than other groups are. In this sense, we might not need a parliament of scientists, but perhaps a parliament of things (Latour 1993, p. 142).

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De nieuwe klimaatbeweging

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lid van de schrijversgemeenschap van Oikos,
Denktank voor sociaal-ecologische verandering
(www.oikos.be).

Van 30 november tot 11 december 2015 vindt in Parijs COP 21 plaats: daar zouden eindelijk definitieve afspraken om de klimaatverandering tegen te gaan gemaakt moeten worden. Na de dramatische mislukking van de 2009 klimaattop te Kopenhagen en veel tussentops de voorbije jaren die vooral stilstand opleverden, is dit voor de meeste waarnemers de top van de laatste kans. VN- secretaris-generaal Ban Ki-Moon riep op 23 september 2014 de wereldleiders bijeen in New York met de dringende vraag om deze kans niet te verspelen. Er werden nieuwe beloftes gedaan want volgend jaar is het menens. Wereldwijd komt een nooit geziene mobilisatie op gang en schudden burgers onverschilligheid en lethargie van zich af.

Op zondag 21 september 2014 stapten zo'n 400.000 mensen door de straten van New York. Zoals op voorhand aangekondigd ging het om de grootste klimaatbetoging ooit, in de VS, maar ook daarbuiten. Bovendien bleef de 'People's Climate March' van 21/9/2014 niet beperkt tot New York alleen. In verschillende steden zoals Londen, Berlijn, Parijs, Melbourne, maar ook Delhi en Bogota, namen wereldwijd zo'n 675.000 mensen in totaal deel aan grote manifestaties, betogingen en happenings.

Disruption

Opvallend aan deze megabetogingen was de grote rol die de sociale media speelden in het op straat krijgen van zo veel mensen wereldwijd. De groene internetsite AVAAZ stond in voor een groot deel van de mobilisatie. De documentaire film "Disruption" laat zien hoe de betoging werd voorbereid. En tegelijk hoe deze nieuwe klimaatbeweging van onderop vorm kreeg. Dit is een beweging die voortkomt uit verontwaardiging omdat uitgerekend in de rijke VS de sociaal zwakste en gekleurde Amerikanen het meest kwetsbaar bleken voor milieurampen en op cynische manier door de overheid in de steek gelaten werden. Maar tegelijk is het een

beweging die hoop biedt, een nieuwe strijdbare sociale beweging, die met de voeten in de modder, zelf mee helpt aan de heropbouw van wijken na de klimaatverwoesting, opkomt voor 100% duurzame energie en voor groene jobs.
Maar een beweging die ook bewust de confrontatie aangaat, radicaal aanstuurt op het stopzetten van olie- en gasboringen, van de aanleg van pijpleidingen en de bouw van kolenterminals. Daarbij gaat het in wezen niet meer om een milieustrijd, maar om een harde schreeuw om rechtvaardigheid: de zogenaamde "climate justice". De film "Disruption" toont hoe plaatselijk mensen gemobiliseerd worden door activisten van CJA (Climate Justice Alliance): Afrikaanse Amerikanen, Latino's, indianengemeenschappen, Aziaten en Micronesiërs, blanke arbeiders, vakbonden, jeugdgroepen, vrouwen- en moedergroepen, kerkelijke organisaties zoals Greenfaith.

“This is not just about the environment, it’s about the community, it’s about public health, it’s about jobs, it’s about justice”

Deze maken zich allemaal op om een verbeten strijd te gaan voeren, “the fight of our lives”. “This is not just about the environment, it’s about the community, it’s about public health, it’s about jobs, it’s about justice,” zegt Eddie Bautista van CJA New York. “Het gaat niet om ijsberen of ijsschotsen, maar om je broer die astma heeft.”

No Time

De wortels van de nieuwe milieu- en klimaatbeweging verzetten zich tegen de exploitatie van niet-conventionele brandstoffen in de VS en Canada. De laatste jaren schoten actiecomités als paddenstoelen uit de grond. Tegen teerzandginningen, fracking, het aftoppen van bergen voor mijnbouw, de aanleg van pijpleidingen voor het vervoer van zware olie, de doortocht van mammoettransporten met supertrucks, de aanleg van exportterminals of de opzet van diepzeeboringen. Het gaat overigens niet enkel om een Noord-Amerikaans verschijnsel. De plaatselijke actiegroepen maken deel uit van een wereldwijde verzetsbeweging tegen de olie- en gasindustrie.
Naomi Klein beschrijft de beweging in haar laatste boek ‘No Time’.[ii]
De wereldwijde frontzone van verzet werd boven de doopvont gehouden en kreeg de naam ‘Blockadia. Dit omdat het steeds gaat om het afblokken van nieuwe vormen van boringen en exploitaties van de fossiele-brandstofindustrie. Deze industrie is steeds wanhopiger op zoek naar nieuwe gas- en olievoorraden en daarbij steeds minder scrupules aan de dag legt. Zelfs als voor het winnen van schaliegas of teerzandolie kostbare natuurgebieden opgeofferd moeten worden, of als de exploitatie een gevaar inhoudt voor watervoorraden, milieu, gezondheid, zelfs als de ontginning peperduur blijkt, als de energie-opbrengst misschien zelfs lager uitvalt dan de energiekost voor de exploitatie, drijft men door. Het gaat om een stormloop op nieuwe koolstof, op extreme energie. Voor de olie- en gasindustrie is het aanboren van de nieuwe voorraden een kwestie van leven of dood. Toegeven dat de voorraden eindig zijn is zo veel als het eigen doodvonnis tekenen. Dit verklaart de verbeten inzet om toch tal van maagdelijke terreinen in te palmen, strijd te voeren met de plaatselijke bevolking in nieuwe ‘offerzones’, om grondrechten te negeren van inheemse volkeren, om indien nodig geweld te gebruiken en politici zwaar onder druk te zetten. Voor het vervoer van de nieuwe olie zijn echter nieuwe megaprojecten nodig. De Keystone XL – pijpleiding die de teerzandontginningen in Alberta (Canada) over 3.500 kilometer moet verbinden met raffinaderijen in Houston (Texas) kan dit illustreren.
Eigen aan deze nieuwe protestbeweging is dat ze niet meer onderhandelt, niet opnieuw gaat zoeken naar compromissen. Waarom zouden ze goed land opofferen aan nieuwe boringen, als de wetenschap zegt dat 80% van alle fossiele brandstoffen onder de grond moet blijven, indien we willen vermijden dat de klimaatverandering totaal onbeheersbaar wordt? “Leave the oil in the soil, the coal In the hole, the tar sands in the land” is het nieuwe mantra. Solidariteit over de grenzen heen wordt doodgewoon: “ni ici, ni ailleurs”, zoals de Franse anti-frack-activisten zeggen. De tijd van NIMBY (Not In My Backyard) is ver heen.

Tijd voor een nieuwe radicale massabeweging

Het is dus tijd voor een nieuwe massabeweging. Wereldwijd. Meer zelfs, die is al volop bezig. De historicus van de Amerikaanse arbeidersbeweging Jeremy Brecher spreekt van een rebellie, een volksopstand. [iii] Mensen kiezen massaal voor een nieuwe strategie in de strijd tegen Big Oil, na decennia van halfhartig beleid van de overheid. Alsook na het falen van 'Big Green', de klassieke milieuverenigingen. Mensen willen het recht in eigen handen nemen om hun toekomst en die van hun kinderen veilig te stellen. De vakbonden moeten daarin het voortouw nemen. In geen geval mogen ze zich laten misbruiken door Big Oil om het handvol jobs te verdedigen dat tot stand kan komen bij het boren naar olie of gas of het aanleggen van pijplijnen.

Die nieuwe basisbeweging heeft ook nood aan nieuwe keuzes, een duidelijk afgelijnd programma waar duizenden, zo niet miljoenen mensen zich kunnen achter scharen wereldwijd. Geen technisch amalgaam, geen voorgekauwd compromis dat het maximaal haalbare vooropstelt, maar klare taal, doelstellingen die zeggen waar het op staat, die urgentie vertalen in concrete actie, die terug hoop bieden en perspectief op redding.

Als we willen vermijden dat ons klimaat totaal ontspoort, moeten we vasthouden aan een maximale opwarming van 2°C. Dat is de belangrijkste aanbeveling van de klimaatrapporten van het Intergovernmental Panel on Climate Change (IPCC). In dat geval mogen we tussen 2000 en 2050 niet meer dan 886 Gigaton C02 uitstoten. [iv] Maar het CO2-emissie-potentieel van alle op dit ogenblik gekende reserves aan fossiele brandstoffen (steenkool, olie en gas, in handen van privémaatschappijen en staten) bedraagt maar liefst 2.795 Gigaton CO2. Dat is zo goed als het vijfvoudige. Om voor 80% zeker te zijn dat de 2°C grens gerespecteerd wordt, moet 80% van deze fossiele reserves in de grond blijven.

Dat wil zeggen dat de belangen van de fossiele brandstof-industrie en die van de mensheid onverzoenbaar zijn geworden. Het wordt een wereldwijde strijd op leven en dood. De grote energiemaatschappijen en autoritaire regimes die voor hun voortbestaan geheel afhankelijk zijn van de inkomsten van fossiele brandstoffen, houden de internationale politiek en economie in een wurggreep. Hun belangen zijn sterk verbonden met die van de grote banken.

Door het schaarser worden van conventionele bronnen van fossiele brandstoffen, is het exploiteren van niet-conventionele bronnen (bijv. teerzand- en schalie-olie, schaliegas) en het aanboren van nieuwe locaties (bijv. aan de Noordpool, diep onder zee) voor hen veel lucratiever geworden. Maar de kosten voor milieu en klimaat zijn immens. Terwijl het enkel zorgt voor uitstel van executie.

80% van de fossiele brandstoffen moet in de grond blijven

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i Zie : http://watchdisruption.com/
ii Naomi Klein, No Time. Verander nu voor het klimaat alles verandert, De Geus, Breda, 2014
iii Jeremy Brecher, "Climate Insurgency : A Strategy Against Doom", Paradigm Publishers, te verschijnen in 2015
iv Carbon Tracker Initiative, "Unburnable Carbon", maart 2012

Drie concrete acties dienen zich aan: het stopzetten van alle subsidies van overheden aan fossiele brandstoffen, een verbod op het gebruik van niet-conventionele brandstoffen (bijv. via de Europese richtlijn over de kwaliteit van de brandstoffen) en het schrappen van alle investeringen in de fossiele brandstof-industrie.

Vooral dat laatste spreekt tot de verbeelding. Het gaat om de zogenaamde *desinvesteringsbeweging*, die startte aan Amerikaanse universiteiten. Recent kondigde ook de filantropische stichting van de Rockefeller-familie aan dat ze hun investeringen in fossiele brandstoffen zullen schrappen. Verenigingen die opkomen voor eerlijk investeren zoals bij ons FAIRFIN in België verdedigen al langere tijd acties in deze zin. Het is aan individuele burgers, de milieubeweging, vakbonden, pensioenfondsen, maar ook aan overheden om zich te richten tot banken en financiële instellingen met de eis om niet langer te investeren in vervuilende en klimaatbedriegende activiteiten. Maar hoe zit het met de Vlaamse universiteiten?

Nood aan een mondiaal klimaat /energiepakket

Er moeten duidelijke objectieven komen voor de vermindering van broeikasgassen wereldwijd.
Europa moet daarbij een voorlopersrol blijven spelen en niet zwichten voor de olielobby. Zo dringen de Europese milieubewegingen bijv. aan op een vermindering van de Europese uitstoot van broeikasgassen met 55% tegen 2030, met 95% tegen 2050. Dat zijn de grootte-ordes die nodig zijn als we het klimaatprobleem echt ernstig nemen. Alsook voor ambitieuze bindende doelstellingen voor energiebesparing en hernieuwbare energie. Dan kan Europa op de klimaattoppen van Lima eind dit jaar en Parijs (eind volgend jaar) wederom de *lead* nemen in plaats van het initiatief over te laten aan de VS en de BRICS-landen.

Er wordt best toegewerkt naar een internationaal bindend klimaatakkoord. Maar wellicht zit dat er niet in en zullen we stranden op een systeem van vrijwillige overeenkomsten. Dat hoeft niet het einde te zijn, als alle landen ieder voor zich de lat hoog genoeg leggen. Met de recente beslissing van president Obama om de uitstoot van energiecentrales fors aan banden te leggen en met de beslissing van China om ook werk te maken van een koolstofarme economie, is er voor het eerst weer hoop binnen de internationale klimaatkringen. China heeft overigens in de periode 2001-2010 voor meer dan 80 gigawatt aan kolencentrales gesloten en ook de investeringen in nieuwe kolencentrales zouden aanzienlijk teruglopen.

De vervuiler moet betalen

Emissieplafonds (caps) en doelstellingen voor energiebesparingen en hernieuwbare energie zullen niet snel genoeg tot resultaten leiden, als de prijs voor koolstof (voor CO2) niet fors verhoogd wordt. De vervuiler moet betalen. In de eerste plaats de fossiele brandstof-industrie zelf. Want nu zitten we in de cynische situatie dat naarmate olie schaarser wordt, de olieprijzen stijgen en de oliemultinationals meer winsten boeken waardoor er met meer geld meer druk uitgeoefend kan worden. De winst die de vijf grootste oliemaatschappijen boekten tussen 2001 en 2010 bedroeg maar liefst 900 miljard dollar.
Ook andere sectoren die blijven kiezen voor fossiele brandstoffen en dralen met de transitie naar koolstofarme oplossingen, moeten meebetalen.

De vraag is hoe deze vervuilingskosten het best worden aangerekend? Kan het Europees stelsel van de CO2-emissiehandel in die mate hervormd worden, dat het een performant systeem wordt om de uitstoot van broeikasgassen voldoende sterk terug te dringen? Velen betwijfelen dit.

Het hele ETS-systeem is nu tot een ongelooflijke koehandel verworden. Wat ons onvermijdelijk confronteert met de vraag ten gronde: zal een mechanisme van afkopen en uitruilen, of zeg maar ‘sjacheren’ met vervuilingsrechten, niet altijd tot ongewenste effecten of zelfs een totale mislukking leiden? Is een dergelijk verregaand vertrouwen in marktmechanismen niet geheel misplaatst? De prijs van CO2 op de CO2-markt schommelt momenteel rond de 4€. Om echt werkbaar te zijn zou een prijs van 30 € nodig zijn.

Energiespecialist Aviel Verbruggen zegt al jaren dat een CO2/energie-taks zeel simpeler en efficiënter kan zijn.[v] Een CO2/energie-taks kan perfect gecombineerd worden met straffe "caps". De opbrengst van zo een CO2/energietaks kan deels gebruikt worden om de arbeidskosten te verminderen in de ontwikkelde landen. Maar een groot deel, zo niet het grootste deel, zal moeten gaan naar de afbouw van onze uitstaande ecologische schulden aan het Zuiden.

ONDERHANDEL INTERNATIONAAL, MAAR HANDEL VOORAL LOKAAL

De 21ste eeuw wordt de eeuw van de steden. Het grootste deel van de wereldbevolking leeft in steden en de grote metropolen kunnen het verschil maken. Als zij kiezen voor een duurzame transitie trekken ze de rest mee. Zo is er de internationale vereniging van lokale besturen, ICLEI (Local Governments for Sustainability) die maar liefst 1200 lokale steden en regio's groepeert (met een grote vertegenwoordiging van steden en regio's uit de VS en Australië). Daarnaast is er de Europese samenwerking van steden die de Burgemeestersconvenant ondertekenden. Het actieprogramma Agenda 21 dat het licht zag op de Rio-conferentie in 1992 blijft bovendien lokale besturen inspireren.

Benjamin Barber verwacht geen heil meer van de natiestaten of van een multilaterale diplomatie op maat van natiestaten . Staten zoals de VS, China, India, Australië hebben zich helemaal ingegraven en klampen zich vast aan hun nationale soevereiniteit. Zij zijn "disfunctioneel in hun onvermogen om grensoverschrijdend samen te werken". Burgemeesters in grote steden zijn niet gebonden door dat soort van nationale ideologie. Zij handelen pragmatisch, zij zoeken naar oplossingen. Zij kunnen beter inspelen op de nieuwe mondigheid van burgers. Steden staan dan ook voor de uitdaging om zich te versterken tegen de gevolgen van de klimaatverandering. Zij nemen ook het voortouw in de strijd voor maatregelen die de effecten van de opwarming alsnog kunnen tegengaan. Overigens, 80% van de broeikasgasemissies wordt uitgestoten door steden. Het is dan ook in de steden dat de oplossingen gevonden moeten worden.

In eigen land geven steden als Gent, Leuven, Mechelen het voorbeeld, naast de provincies Limburg en Vlaams-Brabant. Zij gaan voor een koolstofarme toekomst, voor een klimaatneutrale stad of provincie. Maar ze hebben nog een hele weg te gaan. Buitenlandse steden zoals Kopenhagen, Stockholm, Hamburg, Freiburg, Portland tonen aan wat mogelijk is als men over een langere periode aangehouden duurzame keuzes maakt.

Energieproductie in gemeenschapsbeheer

Tegenover de agressieve aanspraken van de fossiele brandstof-industrie die vecht voor haar overleven door het aanslaan van steeds nieuwe gronden, staat de onmiskenbare opmars van een totaal ander model: dat van gedecentraliseerde en distributieve energieproductie. Zon, wind, waterkracht zijn gemeenschappelijke goederen waar iedereen gebruik kan van maken. Door de snelle ontwikkeling van duurzame technologieën kan dit plaats vinden tegen steeds kleinere kosten. Private burgers worden zelf eigenaar van zonnepanelen of participeren in windturbines of andere vormen van duurzame productie op lokaal niveau. Dat laatste kan een bewuste keuze worden, stelt een nieuw manifest van het Vlaams Transitienetwerk Middenveld: "We kunnen ook kiezen voor publieke en/of collectieve eigendom van hernieuwbare energie installaties". De auteurs van het manifest tonen dat in Duitsland de eigendom van de installaties van duurzame energie al ruim verspreid zit over maatschappelijke groepen: privépersonen en coöperatieven bezitten 40% van de installaties.

v Zie o.m. Aviel Verbruggen, De Ware Energiefactuur, Houtekiet, 2008

De grote vier energieproducenten (EON, RWE, EnBW en Vatenfall) amper 7%. Voor de fossiele elektriciteitsproductie is het beeld totaal anders: daar bezitten de grote vier maatschappijen 80% van de productie. In de toekomst kunnen steden en gemeenten terug een grotere rol gaan spelen in de lokale energietransitie. Gemeentelijke energieprojecten die echt kiezen voor plaatselijke productie van groene energie (in plaats van de aankoop van groene stroom uit het buitenland) of de (her)communalisatie van energieproductie, plaatselijke netwerken en opslagsystemen kunnen complementair zijn met projecten in gemeenschappelijk beheer, energie als een nieuwe vorm van *commons*.

Veel initiatieven bloeien spontaan op. Maar aan de andere kant gaan we uit van enige urgentie. Het organiseren van de transitie door gemeenten met burgers en groepen van onderop, maar ook met ambtenaren, middenveldverenigingen en politici die een kader creëren dat dit ook echt mogelijk maakt binnen een vooropgestelde tijd, is dan wellicht de beste werkvorm. De beweging 'Transition Towns' van Rob Hopkins toont aan wat verandering van onderop vermag, waarbij burgers het voortouw nemen en lokale besturen trachten te overtuigen. Anderzijds is ook een meer gestuurde transitie met een actieve inbreng van lokale en regionale overheden een reële mogelijkheid. Dat bewijst Jan Rotmans in concrete transitieprojecten in Nederland of bewijzen transitie-arena's in Vlaanderen zoals DUWOBO en PLAN C.

Een nieuwe beweging maar nu mét politieke agenda

De nieuwe transitiebeweging voor de energiesector, en bij uitbreiding voor onze hele economie en samenleving, groeit van onderop en wordt mee aangestuurd door delen van de overheid en het middenveld. Maar de lat ligt hoog en het zou wel erg naïef zijn om te denken dat een dergelijke transitie (revolutie?) heel *smooth*, gemoedelijk kan verlopen, zonder op tegenstand te stoten. Het tegendeel is duidelijk waar. Transitie is oorlog. Gevestigde machtsgroepen gaan keihard in het verweer. De fossiele industrie heeft alles te verliezen en kan zich geen vergelijk permitteren. De echte transitie zal moeten worden afgedwongen worden. Niet enkel in ideeënlabs en workshops, maar ook op straat, via acties, door geldstromen te veranderen.

Het goede nieuws is dat deze acties op gang komen. En nog beter nieuws is dat we deze acties nu ook een focus kunnen mee geven. Zodat ze niet steriel blijven zoals helaas veel acties van Occupy, Indignados, etc. Die zorgden voor broodnodige sensibilisering. Maar die zo makkelijk konden gerecupereerd worden. Het is aan de nieuwe klimaatbeweging om tot op het bot te gaan. Om actief aan politiek te doen. En niet te stoppen tot de olie effectief onder de grond blijft. Tot de laatste boor stil valt en de laatste oliepomp stopt met knikken.

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vi Benjamin Barber, Als Burgemeesters zouden regeren, Nieuw Amsterdam, 2014

The new green economy: a myth?

An interview with Matthias Lievens, political philosopher and co-author of the book 'De mythe van de groene economie'

Tim Christiaens
Massimiliano Simons

In environmental discussions the idea of a 'green economy' is very present nowadays, but what does it really mean? And can it really be a solution? In 2012 Matthias Lievens, political philosopher, and Anneleen Kenis, geographer working on human ecology and ecological citizenship, wrote a book together 'De mythe van de groene economie'. In this book they debunk the concept of 'green economy' as a myth, doomed to fail as a solution for climate change. The book caused public debate in Belgium and will soon be translated into English as 'The Limits of the Green Economy From re-inventing capitalism to re-politicising the present', scheduled for April 2015 by Routledge. To give a glimpse of the interesting ideas in the book, Global had to opportunity to interview one of its authors, Matthias Lievens.

•You wrote the book together with Anneleen Kenis, who works at the research groups of geography and bioeconomics in Leuven, while you are a philosopher. How did you two meet and decided to wrote this book together?

LIEVENS: Actually, when we first wrote the Dutch version of the book we didn't see it as an academicproject, but rather as a socially engaged project. We were both active members of the climate justice movements, especially around the summit in Copenhagen in 2009. We decided to write the book shortly after this summit. The objective was to make a political intervention in an on-going debate. A kind of shift was taking place in the environmental movement, a repositioning. We wanted to intervene in this process.

Of course, while writing this book, we also drew on our respective academic specialisations. Anneleen Kenis is working in the field of political ecology, whereby she especially studies recent climate movements. I contributed to our common reflection on the basis of critical social and political theories which I am researching.

I t is common for academics to first write a scholarly book and then write a popular version of it. For us it was a bit the opposite: we wrote this political-popular book and it had quite some success. It triggered a lot of debate. Our colleagues at the university convinced us that our argument was also of academic interest, and we therefore decided to develop our ideas in a more theoretically sound, rigorous and refined way. That is why we started to rewrite the book. The English version is not really a translation, but actually a different book. The general thrust of the argument is the same, but the book is theoretically more precisely elaborated. Furthermore, the debates we have had in Flanders and the Netherlands in the meantime allowed us to clarify some issues. For example, the English book contains a more detailed discussion of what the 'green economy' is and what it is not. We also thoroughly updated the book. It will be published with Routledge next year actually *[April 2015]*.

People-planet-profit

•So let us turn back to the book. What is the green economy exactly and why is it a myth?

LIEVENS: The notion of the green economy is still quite vague. Five to ten years ago nobody spoke about it except for some academics or NGOs. It is actually a notion that emerged soon after the Copenhagen summit in 2009, but the germs were already there. It is a kind of paradigm shift in thinking about environmentalism and environmental politics.

One of the key features of that paradigm shift is an increasing reliance on the market. For a long time we thought that the environmental crisis is a fundamental challenge for the market society, economic growth, industrialism, etc. The paradigm shift states: "No, both can be reconciled. Even more: tackling climate change can become an economic opportunity." The ecological crisis is presented as an economic opportunity. Especially after the financial crisis, this is a message that many people like to hear.

But what we observe is that a kind of means-ends reversal is taking place. Doing something about ecology or about climate change becomes a means for the actual goal, namely to realise growth, profit, etc. As such, this paradigm shift is interesting, it is fascinating to see how international institutions, lobby groups and big multinationals discover the ecological question, try to work on it and try to develop their own response to it. The claim is that we can reconcile three goals: we can realize climate stabilisation, economic growth and social equity or social justice at once. This is the typical 'people-planet-profit' idea.

That story sounds nice, it is attractive. If it would work, we should start with it immediately! But it is a story, and we think it is a myth, because in actual practice we see that there are difficult trade-offs to be made: choices between economic growth or climate stabilisation, between economic growth and social justice.

We cannot realize all three at the same time. We have to make priorities. What we see in current green economy projects is that priority is given to economic growth and new business opportunities, at the cost of social equity and often at the cost of sustainability. Many proposals that have been made in the framework of the green economy project are actually not so sustainable at all. We think about agrofuels, emission trading, et cetera. That is why we started to ask a number of critical questions about the green economy project.

•Indeed, one of the main targets in your book is carbon trading. You suggest the system leads to absurd situations, such a booming industry in unmarketable refrigerators in China because the HFC-23 emissions trade is very profitable. What is exactly the problem with this approach?

LIEVENS: There are many problems with emissions trading, but they are situated on two levels. First there are practical problems with the way it has been organised and implemented. Many people would defend emissions trading saying: "Okay, we made mistakes. The system is not optimal, but it is a trial-and-error process. We now see that there were some errors that should be corrected. For example, we should no longer give emissions freely to the companies, but they should be auctioned. Companies should pay for the emission rights." So a number of corrections are being debated or are upcoming, which is a good thing. It is thanks to critical voices of scholars and NGOs that certain corrections of the emissions trading system are upcoming.

But there are also more fundamental problems with the system. Let me mention two principal problems. One is that emission trading considers all types of emissions as equal. Emissions by cars are equal to emissions caused by building a windmill or to emissions caused by agriculture, etc. They are all rendered equal, which facilitates trade between different types of emission rights. What we say is that the challenge ahead of us is to fundamentally transform our current form of society. If you want to tackle climate change, you have to fundamentally change the structures of society. This is a political process, which involves choosing priorities. We have to develop strategies which allow us to go where we want to go. From the perspective of social and political change, emissions to heat hospitals or schools cannot just be equated with emissions of aviation, cars or coal-fired power plants. From a social or political point of view, these are radically different things. It is good that we build new windmills, even though their production results in more emissions. We need these windmills, so we have to accept that there are CO2-emissions there. But you cannot just equalize that with building new coal-fired power plants. One is a step in a direction of a low-carbon society, the other means that we are stuck in a high-carbon fossil fuel system. The problem of the emissions trading is that it equalizes things that might be equal from the point of view of climate science - for the climate, the source of CO2 emissions does not matter. But from a social and a political perspective, it does. Different sources of emissions are politically and socially not equal at all.

Our second criticism can be explained in view of the big challenge of the upcoming climate summit in Paris in 2015. After Copenhagen, this will be provide a new opportunity to realize a breakthrough. There are some signs that the US and China are changing strategies. So they could perhaps arrive at a kind of agreement, which as such would be a good thing. But I am afraid of two things, namely (1) if there is an agreement, it will not be ambitious enough and (2) it will be completely based on carbon trading.

You could argue: "Okay, the agreement is not enough, but it is a step in the good direction and then individual countries, for example in Europe, can make steps beyond these limited objectives." In a number of western European countries, where there is a relatively strong social and ecological movement which can put pressure on the government, it might be possible to go beyond those targets. But the problem is that this becomes impossible because of the emissions trading system. Imagine that in Belgium we would impose additional rules on the energy sector stipulating that energy-producing companies have to stick to certain standards and use the newest machines, installations and technology. As a result, they emit less CO_2. The problem is that as a result, there would be glut of superfluous emission rights. The energy companies will have emissions rights that they will not use, thanks to these latest installations and technologies. These emissions rights will come to the market, and as a result the price of emission rights will go down. It will become much cheaper for other companies to buy these rights, so they don't have to do any effort themselves. It is a complex story, but the point is that once you have

an emissions trading system, you cannot go further. You cannot be much more ambitious than the objectives of the system. You know the amount of CO_2 and other greenhouse gasses that will be emitted. If you take additional measures for some sectors, this will give an incentive to other companies and sectors not to do an effort, but to buy extra emissions rights. That is the big risk. We will be stuck in a system that is not ambitious enough and does not allow for what is really necessary to stabilize the climate. There would be a small breakthrough, but it will put a straightjacket on what is possible for the near future. These are our more principled critiques of carbon trading systems.

•There is a clear tendency in ecological discussions to focus on individual behaviour. So ecological issues are framed as responsibility of the consumer. He has to recycle, buy sustainable goods and save energy, etc. Would you agree on this?

LIEVENS: That is actually a point that Anneleen has been working and publishing on. First of all, I think it is very important to experiment with alternative practices. I try to do this as well: I am a vegetarian, engaged in cohousing, I don't have a car, I go everywhere by public transportation, etc. There is a lot that we can do and it is important that we do it. At the same time, it's a complete illusion to think that this will really bring fundamental change. That is the paradox with which we are confronted. Why do I do it then? It is a matter of consistency as an activist who is trying to intervene in the public debate on ecology, to also try to implement what you think. It is also important to develop certain skills. If we ever want a sustainable society, then we will need to re-develop certain skills such as repairing your bike, cooking vegetarian food, living in a different way. Another very important motivation for such practical experiments is to become more autonomous from big corporations and from money. If you don't have a car and share a lot, you need less income.

That being said, it is very problematic to present individual behaviour change as a strategy for change, which it is not. It is a drop in the ocean, it will not fundamentally change the structures of the fossil-fuel economy, the power of the big corporations or the power of the state. A number of NGOs, companies and also governments have set up campaigns that try to influence and steer people's behaviour, which can be problematic for many reasons.
If you try to steer people's behaviour, the relation you have with these people can be problematic: it is paternalistic at best, but often it amounts to forms of discipline. It is rather problematic from a democratic and emancipatory point of view, but it also gives a wrong image of what the ecological crisis is about. It is a huge thing, an enormous challenge. If you only look at climate change, the changes that are needed in our society are fundamental. Suggesting that one can change something by changing individual behaviour, you underestimate the challenge.
You give the impression that the problem is not so big at all, that it can just be enough to recycle a bit or to wear an extra sweater. The result is that people underestimate what climate change and the ecological crisis are about. If you look at the current public debate, the challenge is fundamentally underestimated and I think this focus on individual behaviour contributes to that.

Third party payer system

•Perhaps a bit related to that: Society has lost its ecological spirit a bit after the financial crisis. We are now more concerned with economy then with ecology but in your book you argue that you cannot separate these two problems because they are somehow related to one another. How is this possible?

LIEVENS: It is interesting that shortly after the economic-financial crisis erupted, we observed a reduction of CO_2 emissions, in European countries at least. This shows that negative economic growth can help. It might be an unwelcome or difficult conclusion, but shrinking the economy contributes to reducing emissions. This observation fundamentally challenges our current economic system.

Of course, the financial crisis and its consequences are still there. For the next ten or fifteen years the results will be weighing upon our shoulders. We will have to act on climate change in the next ten to twenty years in a context of lingering economic (semi-)crisis. This is not an optimistic story because it will be difficult. You will have high unemployment, so the risk is that the focus will be on relaunching the economy and realising new economic growth. What you see is that the environmental message is disappearing from the public debate today. Both the government, the left and social movements are talking about austerity and social issues, not environmental ones. At the same time it is within this context that activists, environmentally conscious citizens or political parties will have to bring in an environmental message and try to combine social and environmental issues. You can do that on many different levels. Something I often stress when I speak to trade unionists is that you can do a lot which is both socially just and ecologically sustainable at the same time. Houses and buildings in Belgium, for example, are among the worst isolated in the whole of Europe. In our neighbouring countries isolation standards are much higher. So there is a huge effort to be done to isolate houses, but the problem is of course that those people who live in the worst isolated houses are often the least well-off. Some people don't have the financial means to invest in extra isolation. So we have to think about ways to tackle that problem. The governmental program of the previous Flemish government referred to the idea of the 'third party payer system'.

The idea is that you set up a fund with which you pre-finance isolation investments. You can thereby target those people who have the least financial means. The result is that these people will live in better circumstances, their quality of life increases and their expenses for heating go down. With the net financial difference, they can gradually pay back the amount that has been pre-financed. This can be a kind of loan without or with very little rent. The key issue is that people live in better houses without having to do the financial investments immediately. Such mechanisms can be socially just if they target the right groups and would make a huge difference for the climate because heating is, certainly in Flanders/Belgium, one of the main sources of CO_2 emissions. You could thereby also create new jobs. I think you can intervene in the public debate with these demands in a context of crisis and still do useful things.

There are other issues to work on, like the way the current government is cutting the budget for public transport. Progressive social and political forces, including the labour movements are right to make a big story about that: Stop these cuts and invest in public transport. It is ecologically sound, socially just and on the longer term it will pay off. You will have to invest less in extra roads, there will be less traffic jams. Even from an economic point of view, it is reasonable to do so. But there is a kind of short term-ism at play in the context of crisis which means we risk to have to pay more on the longer term.

•You mentioned that one of the main incompatibilities is the one between economic growth and the earth, but what would then a non-growth economy look like?

LIEVENS: I don't have a blueprint, but I have some ideas. It is a big challenge. We know that a market economy cannot function without growth. We also know there is no growth without adding extra pressure to the ecosystem. So we are stuck there.If you take the criticism of growth seriously, you have to think in terms of alternatives beyond capitalism, beyond an economy based on profit and growth, which is very difficult because we don't have any models.

The more we can liberate ourselves from market logic, the better our steps toward a sustainable direction.

The market for hybrid and electric cars in Belgium is still developing © Thomas Thielemans

It has been tried in the twentieth century and we all know it failed. So it is a huge intellectual challenge to rethink what a post-capitalist, democratic non-growth economy might look like. A number of academics are doing great work on that, a debate is emerging. But that is only intellectual work. The real political challenge is of course to start implementing alternative economic systems. One of the interesting developments we observe in the context of the financial crisis, is that a number of groups and actors are trying to invent or re-invent new economic forms. For example, a fascinating and diverse movement is emerging to set up 'commons' as an alternative both to private and state property. Related to this, there is alsso a resurgence of the idea of cooperatives. It is still a small part of the economy but in the context of the financial crisis you have initiatives here and there for energy cooperatives. One is being set up in Ghent, where I live. You have NewB, a cooperative bank under construction. That is a specific strategy to work on alternative economic forms, but of course we will also have to confront the economy as it is and that will require a struggle, on different fronts, with the fossil fuel system as our main target. We have to re-think what our possible alliances are, how we can integrate the labour movement into a strategy against the fossil-fuel system.

That is a struggle that we will have to wage in the next ten to thirty years I think. I don't have a blueprint, I have some general ideas, and a number of experiments are going on. The criterion is whether we are moving in the direction of an alternative form of social organisation based on less market. The mainstream is now going in another direction by increasing the weight of the market. That is also the logic behind the so-called 'green economy'. It is marketing ever new areas of social life. Our criterion should be different. The more we can liberate ourselves from the market logic, the more leverage we can gain over our future, and the easier it becomes to make steps in a sustainable direction. We can do this for example by setting up cooperatives, by imposing new government rules on companies, by reducing the pressure of the market by sharing, by setting up systems for commons, etc. These debates and practices are emerging and I think this is the way to go. It is not the solution, but it's at least a perspective.

•You mentioned the labour unions, as you did also in your book, as a possible partner in the solution but what precise role can they play? Some say that they have become somewhat obsolete or not only focused on ecological issues and sometimes in conflict with it, for instance, when it comes to jobs and growth. Are they really an ally?

LIEVENS: What needs to be stressed first of all is that in Belgium, we have quite strong trade unions, especially if we compare our situation to other European countries. The fact that the government and right-wing parties speak out so strongly against them testifies to that: they know trade unions have a real, albeit potential political force. Of course, the labour movement has been weakened a lot during the last decades, but potentially they are still a strong force.

If you have millions of members, you can be a force in society.

Secondly, they are not homogenous, precisely because they are so big. For example ABVV, or FGTB [*Belgian socialist labour union*], is very diverse. It is organised according to sectors, each of which has specific traditions, debates, approaches etcetera. Trade unions are also spaces of internal struggle and debates which you don't see as an outsider. The trade union mainstream is often very moderate, focused on jobs and economic growth, as you mentioned, but you also have alternative currents which are often more radical, sometimes anti-capitalist or anti-neoliberal. Groups of workers sometimes start spontaneous actions, challenging the trade union leadership to engage in new debate. Some sections of the trade unions are very open and receptive to ecological ideas. They are eager to learn and to absorb ideas from environmental movements and to try to integrate them into their practices. Ecologically minded people, academics, intellectuals and activists can play a role there, engaging in this debate and trying to 'green' the strategies and direction of trade unions. Sometimes the actual situation helps with that. The current right-wing government that is making strong cuts obliges trade unions to rethink their role. Until now they were just a negotiating partner for the government, but, if the government no longer wants to negotiate, what is their role? They have to re-envision themselves. That process has only just started. Ecologists and critical intellectuals can play a part in that, for instance, through associations like 'Hart boven hard' [*heart above hard, a citizens' initiative*]. In view of the mobilisation that will take place in the upcoming months, it is important that ecologists are also present there with their own banners and slogans to bring in an ecological message, around demands like the ones I mentioned before: better isolation of houses, labour time reduction, etc. There are clear examples of social demands which are also ecological and which can be put forward or defended by trade unions. We often don't realise it, but the potential is there.

•Most of the ecological problems are rather urgent, but is it possible to change the economy overnight?

LIEVENS: No, and that is a reason to be very pessimistic. The question is whether we are already beyond a critical threshold. Some say we are already past that point. Politics is, however, about contingency and sometimes things can go

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fast. But we have to admit we are losing precious time. We need rapid changes and we haven't even started for real yet, though we know that changing economic structures is a huge challenge. We can try to build relations of forces, use every occasion that we have to push things in the right direction. Sometimes history can accelerate. It is not always a slow process. Occasionally radical changes can happen. Look at the fall of the Berlin wall and even the financial crisis, which has put certain things in motion. We have to hope that similar accelerations happen in the field of environmentalism, although we know what the obstacles and difficulties are. I am rather pessimistic, but I am still engaged and try to help move things in the right direction.

•What do you think would happen if indeed this green revolution will not come? Do you think this 'green economy' way of thinking will muddle on or that there will be some kind of drastic, authoritarian moves of the government to impose some kind of green policy without any democratic participation?

LIEVENS: I think the green economy project will go on, even though it is already in crisis. The ideas are there and are being implemented, but

the fossil fuel system and the economic interests that are behind it. Nevertheless, I think that it is now becoming the paradigm and it will be implemented to a certain degree. So if we can't radically change the direction, we have to make sure that the 'really existing' green economy is as ecologically effective and socially just as possible. The worst aspects of emissions trading should be avoided. We can put pressure in order to correct the system as much as we can. Realistically speaking that is what we can do. That doesn't mean that we have to sit around the table with multinationals and set up common initiatives, as some big NGO's are doing. We have to keep putting pressure on the project from the outside and raise our critical voices to make sure the people advocating the green economy project are challenged by our criticism. They are already changing policies concerning agro-fuels as a result of criticism. The same is the case with corrections being undertaken for emissions trading. So you see that resistance, opposition, criticism can be important. That might be what we will have to do in the upcoming years. If the situation comes so far that climate change becomes uncontrollable and difficult to predict, we might see barbaric situations, forms of dictatorship, mass migration and refugees, new forms of racism. It is not a very optimistic picture, but this is what we can expect. If resources become increasingly scarce there will be resource wars. There are already geopolitical tensions for agricultural land. Who will own the land on which we will produce our food? Interesting from a geopolitical stance, but also very dangerous. That is the strategic field we are in and where we have to play our role.

•So it seems the world is doomed, but to end on a slightly more positive note; what do you recommend our readers to do for the green revolution?

LIEVENS: We are confronted with a long process of reinventing what forming a society and living together means, rather than with one sudden moment of change. My advice would be: become a member of a critical NGO, a trade union or a political party, engage yourself and try to realise forms of collective change, on whatever level. Move beyond individual change and try to do politics in a democratic way. I don't have a program that precisely stipulates what should be done. Try to play a role as a collective, build relations of forces, set up action groups, cooperatives, sharing initiatives and so on. We are more than just individuals, we are also citizens and we have to play our role in the democratic game.Move beyond individual change and try to do politics in a democratic way. That is the basic message I give to everyone. I don't have a program that says what to do. Try to play a role as a collective, build relations of forces, if it's within an action group or cooperative and so on. We are more than just individuals, we are also citizens and you have to play your role in the democratic game.

Anneleen Kenis & Matthias Lievens,
'De mythe van de groene economie',
Francis van Arkel,
November 2012.

English version:

'The Limits of the Green Economy - From re-inventing capitalism to re-politicising the present,
Routledge, 2015.

Wout Robijns (°1992)

A Belgian student at the University of Leuven. He studies Political Science and is mainly interested in international relations. Wout loves a good beer, a good dinner and above all good company. He can talk for hours about films, which he often watches during the small hours of the night. As president of the KIB, he tries not to be a dictator.

Tim Christiaens (°1992)

A Belgian student at the University of Leuven. Tim is currently enrolled in the Research Master of Philosophy and the Master of Comparative and international politics. His theoretical interests are mainly in political theory with a special fascination for Michel Foucault, Giorgio Agamben, Theodor Adorno and others. Besides philosophy and politics, Tim likes reading, writing, and hiking. As editor of Global, he tries hard to be a dictator.

Massimiliano Simons (°1992)

A Belgian student currently enrolled in a Master of Sociology at the University of Leuven, after finishing a Master of Philosophy last year. His main approach to political topics is from the perspective of a philosophy and sociology of culture, supplemented by a mainly historical approach. Besides politics and culture, he has a profound interest in the history and philosophy of science, especially irrelevant pseudosciences. As editor-in-chief of Global, Massimiliano's decisions overrule Tim's.

Johan Van den Brande (°1989)

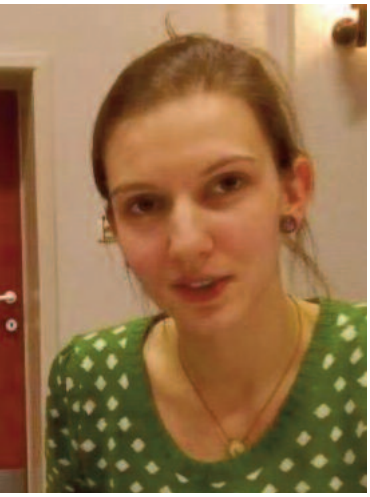
A Belgian student enrolled at a Master of Comparative and International politics. His main field of study is European Politics, but he is interested in most things that are vaguely related to foreign affairs. He is a workaholic with a good sense of humour. In the past he was the bass player of a more or less famous band and he will never stop boring you with stories of his former life as a rock star.

Thomas Thielemans (°1990)

A Belgian student finishing a Master of Comparative and International politics at the University of Leuven, after obtaining a Bachelor in Journalism. His main field of study is Security & Defence, peacekeeping and the *rule of law*. Thomas likes photography, a variety of sports and alternative cinema. He is the newbie of the KIB, his main job is to drive Wout & co from pillar to post.

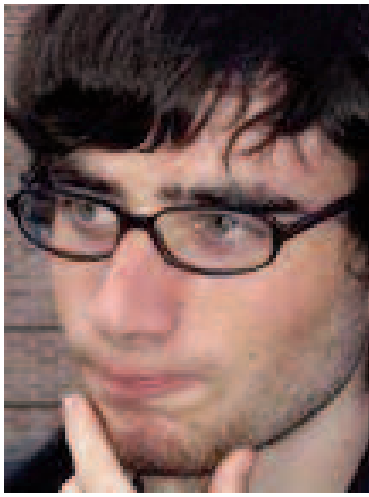
Mona Vera (°1995)

A Belgian student at the KULeuven. She studies Law and is mainly interested in European and International Law. She's hoping to do a specialization in Human Rights. She loves jogging, reading, travelling, learning languages and meeting new people. This summer she worked as a volunteer with kids in a favella in Brazil. At the KIB she's part of the Event Management team and the PR team.



Geertrui De Samblanx (°1992)

Geertrui is a Belgian student currently enrolled in a Master of History. In KIB she is responsible for the creative side of things, such as our promotion stand, because international politics should not be all about crisis and disaster. But first and foremost she tries to 'greenify' KIB, literally. If the decision was hers, all the logo's should be in green.



Jan Vanlommel (°1988)

Jan is a Belgian ex-student of Philosophy who is currently taking a break to pursue his musical goals. His main interests regarding international relations are environmental issues which he tries to approach from an anthropological point of view. When he's not helping his colleagues of the board he is developing his interests in culture at large and unpopular music in specific. Don't buy him a beer, it's better to offer him a nice cup'a tea.

Lars Stollenwerk (°1993)

Currently enrolled in the master of History at the KU Leuven. Now in his second year in the KIB-board, he hopes to continue the development of both the KIB and himself to scale new heights. Lars has an unbridled passion for international politics and late night conversations about a wide range of subjects. He has a lifelong love for scouting, which reflects in his eagerness to discover the world and make new friends. As vice-president, Lars tries his hardest to help Wout to survive his presidency.

Laurence Bielen (°1995)

A Belgian student currently enrolled at the KU Leuven. She pursues a bachelor's degree in Political Sciences. Previously she has lived in France and the U.S. and has a genuine interest in international politics. At the KIB she supports the PR team and the Event Management team.

Joachim Staes (°1992)

A Belgian student at the University of Leuven. He has a master's degree in History. As financial manager, his job is to overlook the accountancy of the KIB. Joachim is interested in sports, history and international relations, especially geopolitical conflicts and development in the Middle-East and Asia. As buddy for the Buddy Program of the KU Leuven he helps foreign students settle in Leuven.

Andrea Stamp (°1994)

A Belgian student at the KU Leuven, where she studies communication sciences. With Romanian as well as German roots, she perfectly reflects the international character of the KIB. As a member of the PR-and event-team, Andrea helps out with launching and promoting the events of the KIB. She's also a member of the subsidy commission of LOKO. In her spare time she enjoys reading, going to concerts, city tripping and keeping up with what's current in the world.

Stijn Vandeperre (°1991)

Part of the Public Relations team of the KIB and will lead its football team to everlasting glory. After finishing his bachelor degree in History, he lost himself in Political Sciences, more precisely in a master in European Politics and Political Economy. Consequently, his major interest lies in the economic and financial perspective of international relations. In his spare time Stijn runs a youth club and plays football. Furthermore, he's a real concert geek who loves and enjoys specialty beers.

Arthur Nieuwland (°1990)

Not a Belgian student, yet he is enrolled at KU Leuven. His interests in international relations mainly relate to conflicts such as in Ukraine or between China and its neighbours. He has an international outlook, which might come from him having Swiss, German and Indonesian family. His responsibilities are maintaining the website and helping out organizing events.

Ben Eersels (°1992)

Ben Eersels (°1992) is currently working on a PhD in Medieval History at the KU Leuven. He researches how common people in the late middle ages influenced urban politics in a peaceful way. At the KIB, Ben is part of the Event team. Furthermore, he loves enjoying a beer (or two), reading and hanging out with friends. He also claims that he's a decent volleyball player, but that still has to be proven.

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